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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/776,303	02/10/2004	Randall Allen Engelland	758.1505USII	3520

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MERCHANT & GOULD PC
P.O. BOX 2903
MINNEAPOLIS, MN 55402-0903

EXAMINER

PHAM, MINH CHAU THI

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 08/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/776,303

Applicant(s)

ENGELLAND ET AL.

Examiner

Minh-Chau T. Pham

Art Unit

1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/26/06.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over the European reference (WO 00/74818 A1), in view of the French Patent (FR 2,034,160), and further in view of Finnerty et al (6,190,432 B1).

The European reference discloses an air cleaner having a filter cartridge (500) with a seal arrangement (543) including a sealing gasket (544) positioned to axially seal the filter inside the housing (page 44, line 30 through page 45, line 22), a projection arrangement including projections (see 814 in Fig. 42) extending outwardly from opposite side of the filter sheath (page 43, line 24 through page 44, line 1), a filter housing with first and second opposite ends and sidewall defining a top, a bottom and opposite sites and an access cover removable from the housing (see details of Fig. 1), a filter cartridge into the housing by engaging the projections extending outwardly from opposite sides of the filter sheath (page 44, lines 4-10), a seal arrangement in thickness (page 44, line 30 through page 45, line 6), and a biasing engagement between the housing and the filter cartridge via a retention or lift mechanism (602) (see page 45, line 23 through page 46, line 4; page 47, lines 8-14). Claims 1-20 differ from the disclosure or the European reference in that the filter cartridge comprising a sheath with projections for engaging with structure inside of the housing to bias the filter cartridge against an end of the filter housing with the seal arrangement providing an axial seal between the filter cartridge and the housing and a z-filter media. The French reference

discloses a sheath (B) positioned surrounding the filter media (15), a projection arrangement including projections (17) extending outwardly from opposite sides of the sheath (B), a filter cartridge (15) being positioned inside the housing with a portion of the air cleaner arrangement in engagement with the projections (17) on the sheath (B) and thereby axially driving the filter cartridge (15) and axially sealing the seal arrangement (4-7) against the housing (see Figs. 2 & 3). Finnerty et al disclose an air filter cartridge (see Figs. 10 & 11) comprising a z-filter media (455) coiled in a non-circular configuration having two semi-circular ends (511, 512) and which are joined by a pair of straight segments. As the semi-circular ends can be considered as "round corners", the entire configuration can be seen as "rectangular" with four rounded corners. The filter media is on its outside surrounded by an impermeable sheet with an adhesive on the filter media side in order to prevent unwinding of the material and to avoid fluid passing through the outside of the filter periphery (see col. 5, lines 12-24). On one side of the filter media there is an outside seal member (460) being a radial seal with four rounded corners. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide a sheath with projections as taught by the French reference and a z-filter as taught by Finnerty et al in the filtration apparatus of the European reference because the z-filter with fluted structure is known to be uniformly distributed of fluid flow and a sheath with sealing feature to provide maximum filtration efficiency preventing any leakage or filter bypassing.

Response to Arguments

Applicant's arguments filed on June 21, 2006 have been fully considered but they are not persuasive.

Applicant argues that none of the cited references discloses "a sheath with projections extending outwardly from opposite sides of the sheath, and a portion of the air cleaner arrangement in engagement with the projections on the sheath and thereby axially driving the filter cartridge against the housing". The Examiner still maintains the European reference as the primary reference and newly introduces the French Patent (FR 2,034,160) as the secondary reference in combination with the primary reference under the 103 (a) rejection to show: a sheath (B) positioned surrounding the filter media (15), a projection arrangement including projections (17) extending outwardly from opposite sides of the sheath (B), a filter cartridge (15) being positioned inside the housing with a portion of the air cleaner arrangement in engagement with the projections (17) on the sheath (B) and thereby axially driving the filter cartridge (15) and axially sealing the seal arrangement (4-7) against the housing (see Figs. 2 & 3). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide a sheath with projections as taught by the French reference in the filtration apparatus of the European reference since a sheath with sealing feature provides maximum filtration efficiency preventing any air leakage or air bypassing around the filter.

Applicant's arguments with respect to claims 1-20 have been thoroughly considered but are moot in view of the new ground(s) of rejection, as discussed above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh-Chau T. Pham whose telephone number is (571) 272-1163. The examiner can normally be reached on Mon/Tues/Thur/Fri 7:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Minh-Chau Pham
Patent Examiner
Art Unit: 1724
August 21, 2006